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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,111	07/17/2003	John McCollum	ACT-369	4470
28661	7590	08/31/2004	EXAMINER	
SIERRA PATENT GROUP, LTD. P O BOX 6149 STATELINE, NV 89449			DINH, SON T	
			ART UNIT	PAPER NUMBER
			2824	

DATE MAILED: 08/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/623,111

Applicant(s)

MCCOLLUM ET AL.

Examiner

son t dinh

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 is/are allowed.
- 6) ☒ Claim(s) 12,13,17 and 18 is/are rejected.
- 7) ☒ Claim(s) 14-16 and 19-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____  | 6) <input type="checkbox"/> Other: <u>East search history</u> .             |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-13 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Voogel (U.S. Patent No 6,137,714).

For the purpose of this rejection, a pass transistor would be considered as a switching transistor because both transistors perform the same function. Also, an on – status bit is just a regular bit that is represented by a charge.

With respect to claims 12 and 17, Voogel discloses a method of of interconnecting two nodes (405D and 405S, figure 4) in an integrated circuit device comprising the steps of storing (performed by transistor 405, figure 4) a charge representing an on-status bit on a gate capacitance (425, figure 4) of a switching transistor (405, figure 4) coupled between two nodes (405S and 405 D), periodically refreshing the charge (performed by transistor 406, figure 4) (also see column 2, lines 15-16 for the periodically refreshing operation).

With respect to claim 13 and 18, when transistor (407, figure 4) is ON, a voltage representing a bit would be applied to the gate capacitance of the switching transistor 405 (figure 4).

### ***Allowable Subject Matter***

Claims 1-11 are allowed.

Claims 14-16, 19-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fail to disclose a circuit for interconnecting two nodes in an integrated circuit device comprising a memory array having a plurality of word lines and bit lines, a refresh transistor having source coupled to one of the plurality of bit lines, a control gate coupled to a dynamic random access memory word line, a switching transistor having a gate coupled to the drain of the refresh transistor, a source coupled to a first one of the nodes and a drain coupled to a second one of the nodes, and an address decoder for supplying periodic signals to drive the word lines and the dynamic random access memory word line (claims 1, and 5); the step of periodically coupling a voltage comprises periodically coupling a voltage having magnitude sufficient to turn on the switching transistor without a  $V_{th}$  drop (claims 14 and 19); the steps of retrieving a signal representing the on status bit from a memory and converting the signal into the voltage (claims 15 and 20); a step of periodic refreshing the charge is performed at a periodic interval that is function of temperature of a die on which the circuit is disposed (claims 16 and 21).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Nishizawa et al disclose a memory device having a switching transistor.

-Worley discloses a memory circuit including a switching transistor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son Dinh whose telephone number is 571-272-1868.

The examiner can normally be reached on 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on 571-272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-1868.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Dinh  
August 28, 2004



**Son T. Dinh**  
**Primary Examiner**